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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

*In re* Application of: §  
Donald MORTON §  
Rishab K. GUPTA §  
David M. EUHUS §  
§  
Serial No.: 07/431,533 §  
§  
Filed: November 3, 1989 §  
§  
For: URINARY TUMOR ASSOCIATED §  
ANTIGEN, ANTIGENIC SUB- §  
UNITS AND METHODS OF §  
DETECTION §

Group Art Unit: 1813

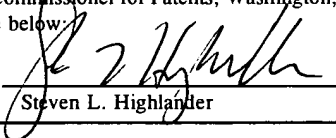
Examiner: H. Sidberry

Atty Dkt.: CADL:002/PAR

CERTIFICATE OF MAILING  
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on the date below:

September 18, 1995  
Date

  
Steven L. Highlander

DECLARATION OF DR. RISHAB GUPTA UNDER 37 CFR §1.132

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

I, Rishab Gupta declare that:

1. I am a U.S. citizen residing at 7118 Costello Ave., Van Nuys, California. Currently,  
I am Vice President of Education and Director of Immunodiagnosis at John Wayne Cancer

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Institute. I have been employed by John Wayne Cancer Institute since July 1, 1991. I am a named inventor of the above-captioned application.

2. Attached to this declaration is a copy of my *curriculum vitae*.

3. It is my understanding that the examiner in charge of the above-captioned application has rejected the UTAA composition claims thereof as anticipated or rendered obvious by Paulie *et al.*, *Cancer Immunol. Immunother.* 17:173-179 (1984).

4. I contacted Dr. Staffan Paulie, first-named author of the Paulie *et al.* paper, and requested samples of antibodies he had used to identify the 92 kD antigen described in the reference. In response, Dr. Paulie provided samples of two antibodies, 7E9 and P7A5, that are directed to the 92 kD antigen. 7E9 is described in the paper and P7A5 was developed from a later fusion.

5. The materials and methods for comparative experiments were as follows:

Two batches of UTAA 90 kD subunit were prepared on March 25, 1993 and on June 29, 1995. These were used as target antigen for Western blots at 5  $\mu$ g per lane of an 8-16% gradient SDS-PAGE slab gel (Novax, San Diego). Electrophoresed antigen was transferred to nitrocellulose membrane, washed, blocked and cut into strips. The strips were reacted with the indicated antibodies

at the indicated dilutions according to standard Western blot protocols. Reactivity was determined using goat anti-mouse Ig conjugated to alkaline phosphatase, thereby detecting both IgG and IgM.

6. As can be seen from the attached Western blots, provided as FIG. 1 (Ab dilution 1:100), FIG. 2 and FIG. 3 (Ab dilution 1:500), it is clear that the 90-100 kD UTAA antigen is not recognized by the antibodies provided by Dr. Paulie. Yet these antibodies have been demonstrated to react with the 92 kD antigen by Dr. Paulie. Thus, the 92 kD antigen described in the Paulie *et al.* paper is immunologically unrelated to the antigen being claimed in the above-captioned application.

7. It is my understanding that the examiner in charge of the above-captioned application has questioned the feasibility of "enhancement" of antibody production in human subjects. To address this concern, the attached FIG. 4 shows the enhancement antibody titers in four melanoma patients following administration of UTAA in the form of irradiated melanoma cells. These data demonstrate that administration UTAA can enhance the production of anti-UTAA antibodies over those levels already existing in melanoma patients.

8. I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Rishab Gupta

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Figure 1

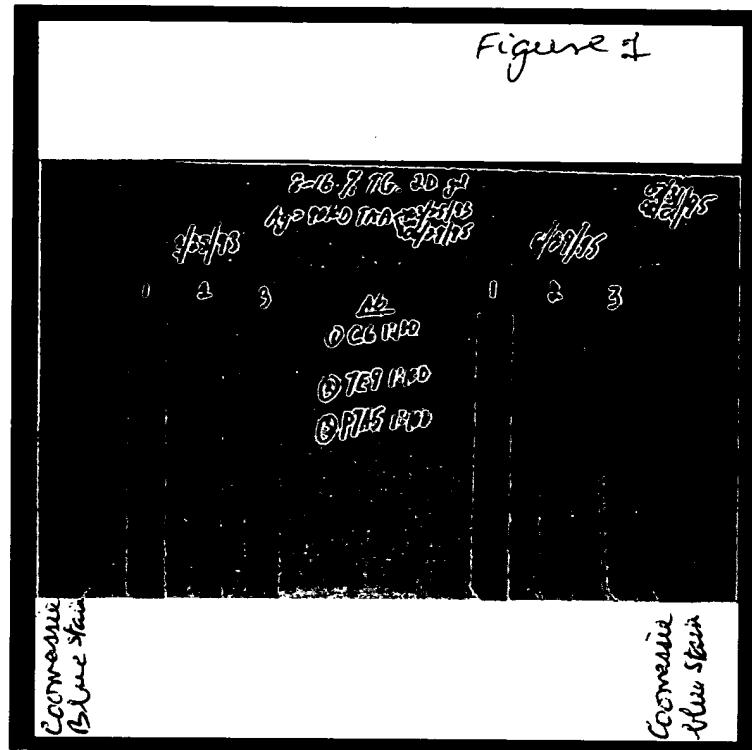
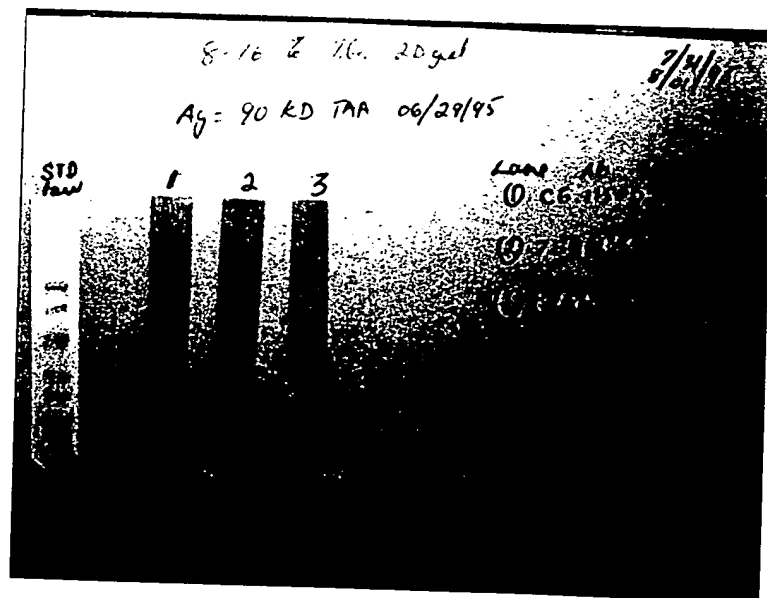


Figure 1

Figure 2

STRATAGENE EAGLEEYE II 08/07/95 17:16:57

IMAGE SIZE (640 x 480 x 8).  
REAL-TIME ACQUIRE.  
IMAGE CREATED ON MON AUG 07 17:14:14 1995.

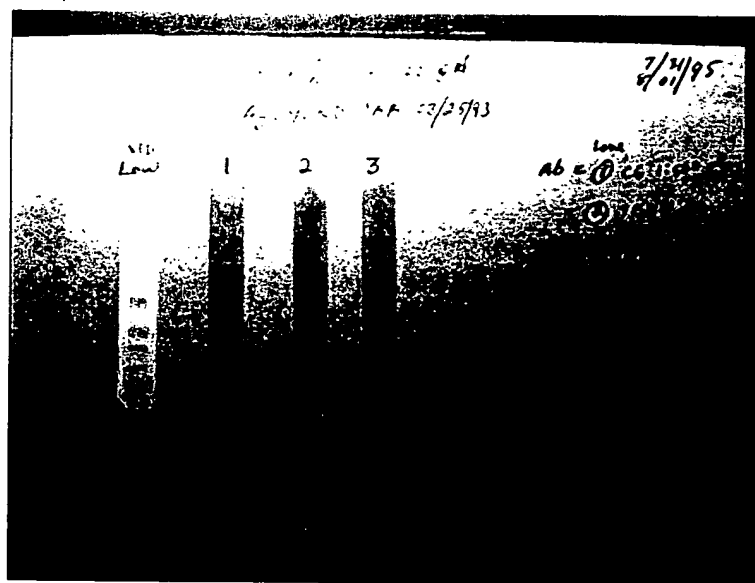


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Figure 3

STRATASINE EAGLEEYE II 08/07/95 17:05:50

IMAGE SIZE 1640 x 480 x 80.  
 REAL-TIME ACQUIRE.  
 IMAGE CREATED ON MON AUG 07 17:05:35 1995.



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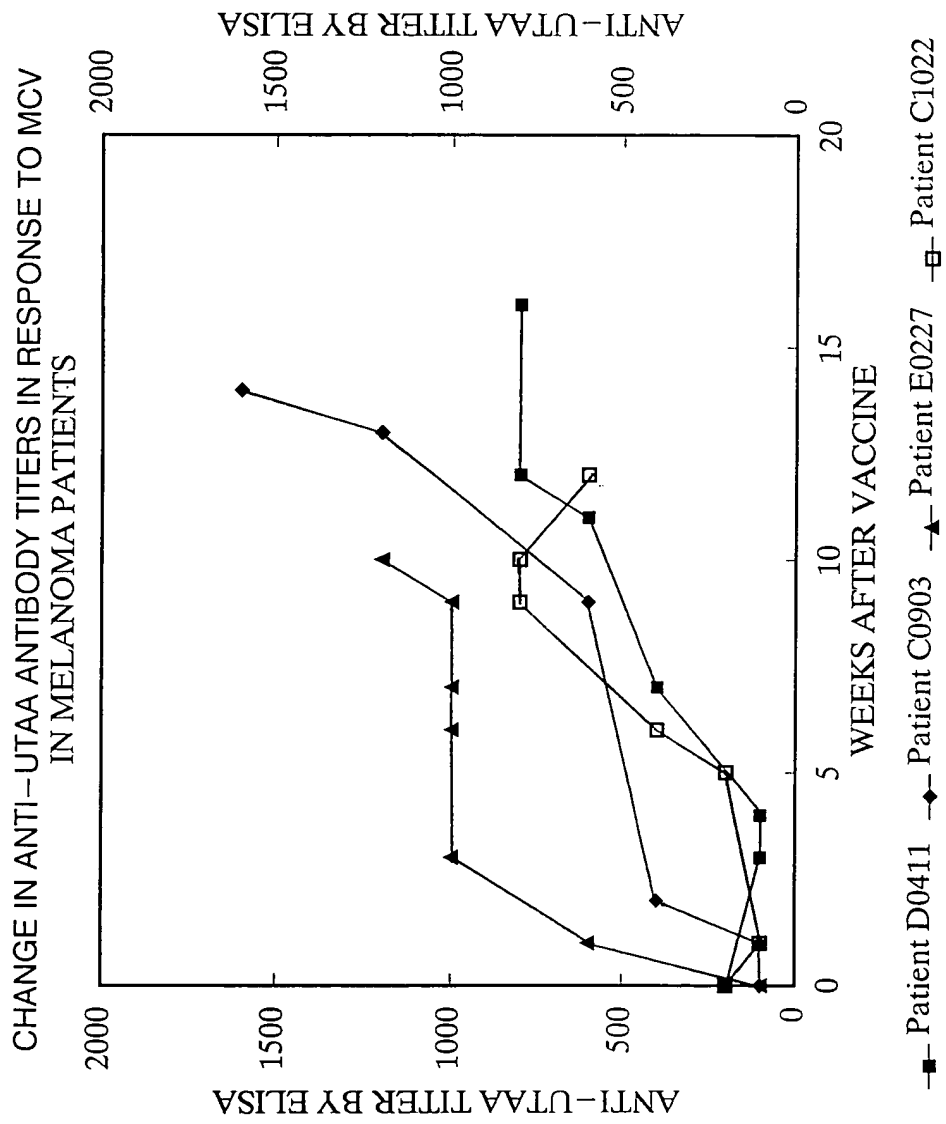


Figure 4



July, 1995

## CURRICULUM VITAE AND BIBLIOGRAPHY

**NAME:** RISHAB KUMAR GUPTA

**PRESENT TITLE:** Vice-President for Educational Affairs and  
Director of Immunodiagnosis

**ADDRESS:** John Wayne Cancer Institute  
2200 Santa Monica Blvd.  
Santa Monica, California 90404, U.S.A.  
Phone: Office (310) 449-5265; FAX (310) 449-5273; Residence (818) 785-1241

**PERSONAL DATA:** Date of birth: April 18, 1943; Place of birth: India; Married; Two children;  
Country of Citizenship: U.S.A.

### EDUCATION:

1960-1963	B.Sc. (Hons); G.B. Pant University, Pantnagar, India
1963-1965	M.Sc. (Microbiology); G.B. Pant University, Pantnagar, India
1965-1968	M.S. (Biochemistry); Rutgers University, New Brunswick, N.J., U.S.A
1965-1968	Ph.D. (Microbiology); Rutgers University, New Brunswick, N.J., U.S.A.

### SPECIAL TRAINING:

1965	Special summer course in microbiology, School of Basic Sciences, India
1967	Summer trainee at the University of Cincinnati, Department of Microbiology, Cincinnati, Ohio, U.S.A.
1967	Trainee at the Battle Memorial Institute, Richmond, Washington, U.S.A.
1968-1970	Post-doctoral fellowship at UCLA Medical School, Department of Microbiology and Immunology, U.S.A.
1970-1971	Post-doctoral fellowship at Yale University Medical School, Department of Microbiology, U.S.A.
1971-1972	Post-doctoral fellowship at Jules Stein Eye Institute, UCLA School of Medicine, U.S.A.
1973	Annual Survey Course in Immunology of the American Association of Immunologists, Woodshole, MA
1976	Protein Separation by SDS-PAGE, Scripps Research Foundation, La Jolla, Ca
1985	Molecular Immunology Course, University of California, San Francisco, Ca

### ACADEMIC APPOINTMENTS:

1991-present	Director of Immunodiagnosis and Vice-president of Education, John Wayne Cancer Institute, Santa Monica, Ca
1991-present	Professor emeritus, Division of Oncology, Department of Surgery, UCLA School of Medicine, Los Angeles, Ca
1985-1991	Professor, Division of Oncology, Department of Surgery, UCLA School of Medicine, Los Angeles, Ca
1981-85	Associate Professor, Division of Oncology, Department of Surgery, UCLA School of Medicine
1979-81	Assistant Professor, Division of Oncology, Department of Surgery, UCLA School of Medicine
1975-82	Microbiologist (WOC), V.A. Medical Center, Sepulveda, CA
1975-79	Associate Research Oncologist, Department of Surgery, UCLA School of Medicine, Los Angeles, CA
1972-75	Assistant Research Oncologist, Department of Surgery, UCLA School of Medicine, Los Angeles, CA
1971-72	Postgraduate Research Microbiologist, Ophthalmic Microbiology, Jules Stein Eye Institute, UCLA
1970-71	Postdoctoral Fellow, Department of Microbiology, School of Medicine, Yale University, New Haven, CT
1968-70	Lecturer, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA
1965-68	Research Associate, Department of Biochemistry and Microbiology, Rutgers University, New Brunswick

**RESEARCH INTERESTS AND SPECIALTIES:**

Tumor Immunology, Immunochemistry, Microbial Physiology, Membrane Transport, Hybridoma techniques, Monoclonal Antibodies, Enzyme Immunoassay (ELISA), Radioimmunoassay, Molecular biology techniques (purification and enrichment of mRNA, preparation of cDNA, gene cloning, PCR, in situ hybridization, T cell receptors and growth factors.

**ACADEMIC AWARDS AND HONORS:**

1963	University Merit Certificate from G.B. Pant University, India
1963-1965	USAID Traineeship Award
1965-1968	NSF Fellowship at Rutgers
1967	ASM President's Fellowship Award
1969	Sigma Xi-UCLA Chapter
1970-1971	Post-doctoral Fellowship (NRSA) at Yale University
1973	Selected for the Annual Survey Course of AAI
1978	Co-chairman, Tumor Antigens session at the AACR annual meeting
1979	Invited participant in Workshop on Human Tumor Antigens, NIH.
1980	4th Asian Cancer Congress, Bombay, India, invited participant.
1980	Workshop on Tumor Markers, Clinical Ligand Assay Society, Los Angeles, invited faculty
1981	Invited Participant in Workshop on Melanoma Monoclonal Antibodies, NIH.
1981	Workshop on ELISA, Cordia Laboratories, Culver City, invited faculty.
1982	Invited Faculty for Workshop on Practical Aspects of ELISA, Cordia Laboratories.
1983	Invited Faculty for Workshop on Melanoma Immunology, European Soc for Dermatological Res.
1984	Invited participant, 26th Annual Science Writer's Seminar of American Cancer Society.
1985	Invited Speaker at Central Toxicological Research Institute, Lucknow.
1986	Participating Faculty at Hybridoma Techniques Workshop, California State University, Fullerton, Ca
1987	Invited Speaker at the Indian Society of Biological Chemists.
1987	Invited Speaker at the Argentina Society of Immunology and Society of Clinical Invest.
1987	Invited speaker, "Immune Response to Human Melanoma" - Cancer Research Institute.
1988	Ad Hoc Review Member, Clinical Sciences Study Section, National Institute of Health, Bethesda, MD.
1988-1989	Study Section Member, Clinical Sciences, National Institute of Health, Bethesda, MD.
1989	Radioimmunoassay Workshop Faculty, California Polytechnic, Pomona, Ca.
1989-1991	Study Section Member, Immunology, Virology and Pathology, National Institute of Health, Bethesda, MD.
1990-1991	Research Grant Reviewer, Medical Research Council of Canada.
1992-1993	National Reviewer Reserve, NIH, Bethesda, MD.
1993-	Study Section Member, Immunology, Virology and Pathology, National Institute of Health, Bethesda, MD.

**TEACHING PARTICIPATION:**

Immunology, Immunochemistry, Medical Mycology, General Virology, General Mycology, Biochemistry, General Microbiology, Physiology of Fungi, Medical Mycology Seminars, In-depth laboratory Investigations in Tumor Immunology, Special Research Topics in Immunology, Interactive Teaching for second year medical students.

**SCHOLARLY SOCIETY MEMBERSHIP:**

American Association for Cancer Research; American Association of Immunologists  
 American Society of Clinical Oncology; American Association for Education;  
 American Society for Microbiology; Sigma Xi;  
 Society for Oncodevelopmental Biology and Medicine;  
 American Academy of Microbiology; Clinical Immunology Society

**COMMITTEE ASSIGNMENTS:**

1978-present	UCLA Mentor program.
1979	Member of Round Table Symposium Committee of the American Academy of Microbiology.
1979-1983	Member of Research Advisory Committee for Advanced Science Training Program.
1980-1982	Member of the Interviewing Committee for the Advanced Science Training Program.
1985-1988	Control and Oversee the Divisional Business office.
1985-1991	Ad hoc member of Promotion Committees Appointed by the Academic Senate.
1991-present	Human Subject Protection Committee at Saint John's Hospital and Health Center.

**CERTIFICATION:**

Specialist Microbiologist in Medical and Public Health Laboratory

**EDITORIAL POSITIONS:**

1976-	Reviewer, European Journal of Cancer
1978-	Reviewer, Journal of the National Cancer Institute
1979-	Reviewer, Clinical Chemistry
1982-	Reviewer, Journal of Clinical Immunology
1982-	Reviewer, Journal of Neurosurgery
1983-	Reviewer, Developmental and Comparative Immunology
1984-	Reviewer, Cancer Research
1984-	Associate editor, Journal of Clinical Laboratory Analysis
1986-	Member - Editorial Board, Oncology & Biotechnology News
1986-	Reviewer, Journal of Investigative Dermatology
1987-	External reviewer for grant applications of VA Central Office
1988-	Reviewer, Journal of Biological Response Modifiers
1990-93	Member - Editorial Board, Contemporary Oncology
1994-	Reviewer - Cancer

**RESEARCH SUPPORT:**

July 1, 1973 to June 30, 1974; Cancer Research Coordinating Committee of the University of California; "Isolation and Purification of Tumor-Associated Antigens from Malignant Melanoma Tumors: Determination of their Reactivity with Homologous Sera"; \$6,480, R.K. Gupta - Principal Investigator.

July 1, 1973 to June 30, 1974; California Institute for Cancer Research; "Purification of Specific Antibodies from Sera of Melanoma Patients"; \$6,900; R.K. Gupta - Principal Investigator.

July 1, 1974 to June 30, 1975; Cancer Research Coordinating Committee of the University of California; "Isolation and Purification of Tumor-Associated Antigens from Malignant Melanoma Tumors: Determination of their Reactivity with Homologous sera"; \$10,000; R.K. Gupta - Principal Investigator.

July 1, 1974 to June 30, 1975; California Institute for Cancer Research, "Isolation and purification of Tumor-Associated Antigens"; \$9,458; R.K. Gupta - Principal Investigator.

April 1, 1972 to June 30, 1981; NIH PO1 CA 12582; "Immunology and Immunotherapy of Cancer"; Principal Investigator - Dr. D.L. Morton; R.K. Gupta - Project Director on "Purification and Characterization of Tumor Antigens."; Total award for the project component; \$992,000.

April 1, 1981 to March 30, 1984; NIH/NCI RO1 CA 30019; "Purification of Tumor Antigens of Defined Specificities"; \$231,435; R.K. Gupta - Principal Investigator.

July 1, 1981 to June 30, 1982; Cancer Research Coordinating Committee; "Evaluation of Efficacy, Toxicity, and Immune Mechanisms of Extracorporeal Immunoabsorption with Staphylococcus aureus, Cowan I, and Purified Protein A in Producing Tumor Necrosis in Canine Mammary Carcinoma"; \$10,000; R.K. Gupta - Principal Investigator.

July 1, 1981 to June 30, 1986; NIH PO1 CA 12582; "Surgery, Immunology and Immunotherapy of Human Cancer"; Project II - "Characterization of Circulating Immune Complexes and Urinary Antigen of Cancer Patients"; \$354,472; Dr. D.L. Morton - Principal Investigator; R.K. Gupta - Director of Project II.

July 1, 1981 to June 30, 1983; VA Medical Service 821-103; "Prognostic Significance of Circulating Immune Complexes in Human Lung Carcinoma"; \$357,000; D.L. Morton - Principal Investigator; R.K. Gupta - Co-Investigator.

April 1, 1981 to June 30, 1986; NIH P01 CA 29605; "New Approaches to Surgical Oncology"; Project II - "New Approaches to Detection of Subclinical Disease in Stage I and II Melanoma"; \$1,023,285; Dr. D.L. Morton - Principal Investigator; R.K. Gupta - Project Director.

July 1, 1983 to Dec 31, 1988; NIH CA 09010; "Institutional Training Grant and Surgical Oncology"; \$885,000; D.L. Morton Principal Investigator; R.K. Gupta - Co-director.

March 1, 1984 - Feb 28, 1990; NIH R01 CA 30019; "Purification of Tumor Antigens of Defined Specificities"; \$538,115; R.K. Gupta - Principal Investigator.

April 1, 1987 - Dec 31, 1990; NIH P01 CA 12582; "Surgery, Immunology and Immunotherapy of Human Cancer" D.L. Morton Principal Investigator; Project II - "Characterization of Circulating Immune Complexes and Urinary Tumor Antigens of Cancer Patients"; \$262,000; R.K. Gupta - Director of Project II.

April 1, 1987 - Dec 31, 1992; NIH P01 CA 29605; "New Approaches to Surgical Oncology"; D.L. Morton - Principal Investigator, "New Approaches to Detection of Subclinical Disease in Clinical Stage I and II Melanoma"; \$450,000; R.K. Gupta - Director of Project II.

July 1, 1989 to June 30, 1994; NIH T32 CA 09010; "Institutional Training Grant in Surgical Oncology"; \$1,022,533 total award; \$207,804 from 7/1/89 to 6/30/90; D.L. Morton - Principal Investigator; R.K. Gupta - Co-director.

November 8, 1988 - Alex Henig and First Network Savings Bank; "Equipment Purchase" grant; \$15,000, R.K. Gupta Investigator.

March 1 1989 to June 30, 1990; John Wayne Cancer Clinic Auxiliary; "Assessment of Clinical Significance of a 90kD Glycoprotein Tumor-Associated Antigen"; \$250,000; D.L. Morton and R.K. Gupta - Investigators.

July 1, 1990 - June 30, 1991; John Wayne Cancer Clinic Auxiliary; "Assessment of Clinical Significance of a 90kD Glycoprotein Tumor-Associated Antigen"; \$209,000; D.L. Morton and R.K. Gupta - Investigators.

July 1, 1990 to June 30, 1994; State of California, 1RT 77; "Significance of Immune Complexes in Lung Carcinoma"; \$360,445; R. K. Gupta - Principal Investigator.

July 1, 1992 to Sept 29, 1997; NIH PO1 CA12582; Surgery, Immunology and Immunotherapy of Human Cancer; D. L. Morton - PI; R.K. Gupta - Co-investigator; 5% time commitment.

April 1, 1993 to May 31, 1998; NIH PO1 CA29605; New Approaches to Surgical Oncology; D. L. Morton - PI; New Surgical Approaches for the Management of Malignant Melanoma and Other Solid Neoplasms; \$633,144 per year; R.K. Gupta - Co-investigator of Project III.

Oct 1, 1994 to Sept 30, 1998; U.S. Department of Army, Medical Research Acquisition Activity; Grant # DAMD17-94-J-4459; "A New Immunologic Method for Detection of Occult Breast Cancer"; \$800,000; R.K. Gupta - Principal Investigator.

July 1, 1995 to June 30, 1998; NIH T32 CA09689-01A2; "Institutional Training Grant in Surgical Oncology"; \$396,630; P.I. - D.L. Morton, Co-director - R.K. Gupta.

## PUBLICATIONS

### I. ORIGINAL ARTICLES IN JOURNALS AND MONOGRAMS:

1. Gupta RK, Narayan R and Gollokota KG: Differentiation between heat resistance and octyl alcohol resistance of *Bacillus cereus*. *Biochem Biophys Res Comm* 38:20- 30, 1970.
2. Gupta RK and Pramer D: Amino acid transport by the filamentous fungus *Arthrobotrys conoides*. *J Bacteriol* 103:120-130, 1970.
3. Gupta RK and Pramer D: Metabolism of valine by filamentatous fungus *Arthrobotrys conoides*. *J Bacteriol* 103:131-139, 1970.
4. Stone R and Gupta RK: Aerobic and anaerobic landfill stabilization process. *J Sanit Eng Div, Amer Soc Civil Eng* 96:1399-1414, 1970.
5. Gupta RK and Narayan R: Octyl alcohol resistance of *Bacillus cereus*. Factors influencing dipicolinic acid synthesis and sporulation in bacilli. IN: U.P. Agri Univ Res Bull. Gollakota KG (ed.) 2:257-263, 1970.
6. Gupta RK and Howard DH: Comparative physiological studies of the yeast and mycelial forms of *Histoplasma capsulatum*: Uptake and incorporation of L-leucine. *J Bacteriol* 105:690-700, 1971.
7. Howard DH, Otto V and Gupta RK: Lymphocyte mediated cellular immunity in histoplasmosis. *J Infec Immunity* 4:605-610, 1971.
8. Howard DH and Gupta RK: Lysis of zoopathogenic fungi by streptomycetes. *Can J Microbiol* 17:521-523, 1971.
9. Irie K, Gupta RK and Morton DL: Preparation of single cell suspension from surgical specimens of human tumors. *Jap Assoc Immunol* 4:903-906, 1974.
10. Gupta RK, Irie K and Morton DL: Ultra-micro complement fixation technique. *Jap Assoc Immunol* 4:939-950, 1974.
11. Gupta RK and Morton DL: Suggestive evidence for in vivo binding of specific anti-tumor antibodies of human melanomas. *Cancer Res* 35:58-62, 1975.

12. **Gupta RK** and Morton DL: Presence of human tumor-associated antigens in urine of cancer patients. *Surg Forum* 26:158-160, 1975.
13. Morton DL, Golub SH, Sulit HL, **Gupta RK**, Eilber FR, Holmes EC and Sparks FC: Immunologic and clinical responses to active immunotherapy of a malignant melanoma. IN: *Fundamental Aspects of Neoplasia*. Gotteleib, Plescia and Bishop (eds.) Springer-Verlag Inc., New York, pp. 181-201, 1975.
14. deKernion JB, Golub SH, **Gupta RK**, Silverstein MJ and Morton DL: Successful transurethral intralesional BCG therapy of a bladder melanoma. *Cancer* 36:1662- 1667, 1975.
15. Roth JA, Silverstein MJ, **Gupta RK** and Morton DL: Restoration of Immunocompetence by lymphocyte transfusion. *J Surg Oncol* 7:63-66, 1975.
16. Sulit HL, Golub SH, Irie RF, **Gupta RK**, Grooms GA and Morton DL: Fetal calf serum-grown human tumor cells: Influences on the tests for lymphocytotoxicity, serum blocking and arming effect. *Int J Cancer* 17:461-468, 1976.
17. Grimm EA, Silver HKB, Roth JA, Chee DO, **Gupta RK** and Morton DL: Detection of tumor-associated antigen in human melanoma cell line supernatants. *Int J Cancer* 17:559-564, 1976.
18. **Gupta RK**, Irie RF, Morton DL: Antigens on human tumor cells assayed by complement fixation with allogeneic sera. *Cancer Res* 38:2573-2580, 1978.
19. **Gupta RK**, Golub SH, Rangel DM and Morton DL: Relationship between anticomplementary activity and inhibition of PHA-induced lymphocyte blastogenesis by melanoma sera. *Proc ASM 2nd Annual Meeting of Diagnostic Immunology*, 1978.
20. Tang SL, Howard DH and **Gupta RK**: Uptake of metabolites by germinating blastospores of *Histoplasma capsulatum*. *Sabouraudia* 16:271-278, 1978.
21. **Gupta RK**, Golub SH, Rangel DM and Morton DL: Inhibition of mitogen induced lymphocyte proliferation correlated to anticomplementary activity in sera from melanoma patients. *Cancer Immunol Immunother* 5:221-228, 1979.
22. **Gupta RK**, Golub SH and Morton DL: Correlation between tumor burden and anti-complementary activity in sera from cancer patients. *Cancer Immunol Immunother* 6:63-71, 1979.
23. **Gupta RK** and Morton DL: Detection of cancer associated antigen(s) in urine of sarcoma patients. *J Surg Oncol* 11:65-74, 1979.
24. deKernion JB, Ramming KP and **Gupta RK**: The detection and clinical significance of antibodies to tumor associated antigens in patients with renal cell carcinoma. *J Urology* 122:300-305, 1979.
25. **Gupta RK**, Irie RF, Chee DO, Kern DH and Morton DL: Demonstration of two distinct antigens in spent tissue culture medium of a human malignant melanoma cell line. *J Natl Cancer Inst* 63:347-356, 1979.
26. **Gupta RK**, Silver HKB, Reisfeld RA and Morton DL: Isolation and immunochemical characterization of antibodies from cancer patients sera reactive against human melanoma cell membranes by affinity chromatography. *Cancer Res* 39:1683-1695, 1979.
27. **Gupta RK** and Morton DL: Double-antibody method and the Protein-A bearing *Staphylococcus aureus* cells method compared for separating bound and free antigen in radioimmunoassay. *Clin Chem* 25:752-756, 1979.

28. **Gupta RK**, Theofilopolous AN, Dixon FJ and Morton DL: Circulating immune complexes as possible cause for anticomplementary activity in humans with malignant melanoma. *Cancer Immunol Immunother* 6:211-221, 1979.
29. Roth JA, Chee DO, **Gupta RK** and Morton DL: Lymphocyte stimulation to tumor associated antigen. II. Comparison of extracts from fresh human tumors with tissue culture cell lines. *Cancer Immunol Immunother* 7:25-29, 1979.
30. Huth JF, **Gupta RK** and Morton DL: Sequential analysis of urinary antigen(s) in patients with sarcoma. *Surg Forum* 30:150-152, 1979.
31. **Gupta RK**, Silver HKB and Morton DL: Production and Characterization of xenogeneic antisera to tumor associated antigens. *J Surg Oncol* 13:75-89, 1980.
32. Chee DO, **Gupta RK** and Morton DL: Presence of a carcinoma associated antigen in the spent chemically defined medium of a human colon carcinoma cell line. *J Surg Oncol* 13:45-51, 1980.
33. **Gupta RK** and Morton DL: Radioimmunoassay for the analysis of tumor associated antigens with allogeneic antibody. IN: *Serologic Analysis of Human Tumor Antigens*. S.A. Rosenberg (ed.) Academic Press, pp. 645-650, 1980.
34. Rote NS, **Gupta RK** and Morton DL: Tumor associated antigen detected by autologous sera in urine of patients with solid neoplasms. *J Surg Res* 29:18-22, 1980.
35. Chee DO and **Gupta RK**: Chemical carcinogenesis and tumor immunology. IN: *Genetic Differences and Chemical Carcinogenesis*. CRC Monogram, pp. 151-184, 1980.
36. Rote NS, **Gupta RK** and Morton DL: Determination of incidence and partial characterization of tumor-associated antigens found in the urine of patients bearing solid tumors. *Int J Cancer* 26:203-210, 1980.
37. Higuchi M, **Gupta RK**, Irie RF and Morton DL: Natural humoral immunity in patients with malignant disease. *J Clin Lab Immunol* 4:141-143, 1980.
38. Renk CM, **Gupta RK** and Morton DL: Immunosuppressive factors from human breast carcinoma cell lines that affect inhibition of lymphocyte proliferation. *Cancer Immunol Immunother* 9:55-62, 1980.
39. **Gupta RK**: Antigenic complexity in human malignant tumors detected by allogeneic antibody. IN: *Serologic Analysis of Human Tumor Antigens*. S.A. Rosenberg (ed.) Academic Press, pp. 339-380, 1980.
40. **Gupta RK** and Morton DL: Detection of tumor antigens by complement fixation using allogeneic antibody. IN: *Serologic Analysis of Human Tumor Antigens*. S.A. Rosenberg (ed.) Academic Press, pp. 611-619, 1980.
41. **Gupta RK** and Morton DL: Possible clinical significance of circulating immune complexes in melanoma patients. IN: *Fundamental Mechanisms in Human Cancer Immunology*. p. 305-320, 1981.
42. **Gupta RK** and Morton DL: Clinical significance and nature of circulating immune complexes in melanoma patients. IN: *Contemporary Topics in Immunobiology*. F.A. Salinas (ed.) Plenum Press, New York, 15:1-53, 1984.
43. Renk CM, **Gupta RK** and Morton DL: Inhibition of normal allogeneic lymphocyte mitogenesis by a factor from human tumor cells in culture. *Cancer Immunol Immunother* 11:7-16, 1981.

44. Fox JN, Sheikh KM, Gupta RK, Rea TH, Morton DL and Levan NE: Melanoma associated antigens in benign melanocytic disorders. *Dermatol* 20:368-373, 1981.
45. Huth JF, Gupta RK and Morton DL: Development of an enzyme immunoassay to detect and quantitate tumor-associated antigens in the urine of sarcoma patients. *Cancer* 47:2856-2861, 1981.
46. Huth JF, Gupta RK and Morton DL: Purification of antigen(s) from urine of a sarcoma patient by affinity chromatography. *J Surg Oncol* 18:237-247, 1981.
47. Huth JF, Gupta RK and Morton DL: Assessment of the in vivo effectiveness of tumoricidal chemotherapy and radiation therapy by serial analysis of tumor-associated urinary antigen titers in sarcoma patients. *Cancer Treat Rep* 65:1037-1042, 1981.
48. Huth JF, Gupta RK and Morton DL: The relationship of tumor-associated urinary antigens to disease recurrence in melanoma patients. *Surg Forum*, 32:417-419, 1981.
49. Huth JF, Gupta RK and Morton DL: Relationship between circulating immune complexes and urinary antigens in human malignant malignancy. *Cancer* 48:1150-1157, 1982.
50. Roth JA, Grimm EA, Gupta RK and Ames RS: Immunoregulatory factors derived from human tumors. I. Immunologic and biochemical characterization of factors that suppress lymphocyte proliferative and cytotoxic responses in vitro. *J Immunol* 128:1955-1962, 1982.
51. Bentwich Z, Fahey J, Gupta RK, Golub S, Chia D and Barnett E: Comparison of assays for circulating immune complexes in human diseases. IN: *Progress in Rheumatology*. I. Machtey (ed.) John Wright-PSG Inc, Boston, pp. 23-31, 1982.
52. Gupta RK and Morton DL: Clinical significance of tumor-associated antigens and antitumor antibodies in human malignant melanoma. IN: *Melanoma Antigens and Antibodies*. R.A. Reisfeld (ed.) Plenum, New York, pp. 139-172, 1982.
53. Gupta RK and Howard DH: Metabolite transport. IN: *Fungi Pathogenic for Humans and Animals*, Vol. 1. D.H. Howard (ed.) Marcel Dekker Inc. New York, pp. 547- 591, 1982.
54. Finck S, Gupta RK and Morton DL: Excretion of tumor-associated antigen(s) in the urine of patients with colon carcinoma. *J Surg Oncol* 21:84-89, 1982.
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